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1600

## RAW SEQUENCE LISTING

DATE: 10/30/2003

PATENT APPLICATION: US/09/155,003

TIME: 14:49:23

Input Set : A:\11420241.app

Output Set: N:\CRF4\10302003\I155003.raw

3 <110> APPLICANT: SANCHEZ, LUIS ENJUANES  
 4 DURAN, JUAN PLANA  
 5 VILLANUEVA, SARA ALONSO  
 6 JARRENO, MA LUISA BALLESTEROS  
 7 CASTRILLON, JOAQUIN CASTILLA  
 8 MARTINEZ, JOSE MANUEL GONZALES  
 9 PARMESAN, ANDER IZETA  
 10 ZUNZUNEGUI, ANA MENDEZ  
 11 SAENZ, MARIA MUNTION  
 12 PENZES, ZOLTAN  
 13 MORGADO, JOSE MANUEL SANCHEZ  
 14 SANCHEZ, CARLOS MIGUEL SANCHEZ  
 15 PICAZO, CRISTINA SMERDOU  
 16 GURPEGUI, ISABEL SOLA  
 18 <120> TITLE OF INVENTION: VECTORS BASED ON RECOMBINANT DEFECTIVE VIRAL GENOMES,  
 19 AND THEIR USE IN THE FORMULATION OF VACCINES  
 21 <130> FILE REFERENCE: 01142-0241-00000  
 23 <140> CURRENT APPLICATION NUMBER: 09/155,003  
 24 <141> CURRENT FILING DATE: 1998-09-14  
 26 <150> PRIOR APPLICATION NUMBER: PCT/ES97/00059  
 27 <151> PRIOR FILING DATE: 1997-03-12  
 29 <150> PRIOR APPLICATION NUMBER: ES 9600620  
 30 <151> PRIOR FILING DATE: 1996-03-14  
 32 <160> NUMBER OF SEQ ID NOS: 32  
 34 <170> SOFTWARE: PatentIn Ver. 2.1  
 36 <210> SEQ ID NO: 1  
 37 <211> LENGTH: 27  
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 39 <213> ORGANISM: Transmissible gastroenteritis coronavirus  
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 48 <213> ORGANISM: Transmissible gastroenteritis coronavirus  
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 54 <210> SEQ ID NO: 3  
 55 <211> LENGTH: 32  
 56 <212> TYPE: DNA  
 57 <213> ORGANISM: Transmissible gastroenteritis coronavirus  
 59 <400> SEQUENCE: 3  
 60 gcctctagag gagctttgtg gttcacttac ac 32

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65 <212> TYPE: DNA
66 <213> ORGANISM: Transmissible gastroenteritis coronavirus
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73 <211> LENGTH: 26
74 <212> TYPE: DNA
75 <213> ORGANISM: Transmissible gastroenteritis coronavirus
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81 <210> SEQ ID NO: 6
82 <211> LENGTH: 25
83 <212> TYPE: DNA
84 <213> ORGANISM: Transmissible gastroenteritis coronavirus
86 <400> SEQUENCE: 6
87 ggaattccag caatactatt atcaa 25
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93 <213> ORGANISM: Transmissible gastroenteritis coronavirus
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102 <213> ORGANISM: Transmissible gastroenteritis coronavirus
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113 <400> SEQUENCE: 9
114 gatggatggt gtgggtgtgag 20
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131 <400> SEQUENCE: 11
132 atacgagcat caatatcacc 20
135 <210> SEQ ID NO: 12

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## RAW SEQUENCE LISTING

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144 <210> SEQ ID NO: 13
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190 <211> LENGTH: 20
191 <212> TYPE: DNA
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194 <400> SEQUENCE: 18
195 cactgtggca cccttacctg 20
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199 <211> LENGTH: 20
200 <212> TYPE: DNA
201 <213> ORGANISM: Transmissible gastroenteritis coronavirus
203 <400> SEQUENCE: 19
204 gtacaccac tatgttgtct 20
207 <210> SEQ ID NO: 20
208 <211> LENGTH: 20

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209 <212> TYPE: DNA
210 <213> ORGANISM: Transmissible gastroenteritis coronavirus
212 <400> SEQUENCE: 20
213 ttgcgagtga aaacaaatgt 20
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218 <212> TYPE: DNA
219 <213> ORGANISM: Transmissible gastroenteritis coronavirus
221 <400> SEQUENCE: 21
222 ctcacaatca gacgctgtac 20
225 <210> SEQ ID NO: 22
226 <211> LENGTH: 20
227 <212> TYPE: DNA
228 <213> ORGANISM: Transmissible gastroenteritis coronavirus
230 <400> SEQUENCE: 22
231 gacacgttgt ccctggttgg 20
234 <210> SEQ ID NO: 23
235 <211> LENGTH: 20
236 <212> TYPE: DNA
237 <213> ORGANISM: Transmissible gastroenteritis coronavirus
239 <400> SEQUENCE: 23
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244 <211> LENGTH: 9714
245 <212> TYPE: DNA
246 <213> ORGANISM: Transmissible gastroenteritis coronavirus
248 <220> FEATURE:
249 <221> NAME/KEY: CDS
250 <222> LOCATION: (315)..(2315)
252 <220> FEATURE:
253 <221> NAME/KEY: modified_base
254 <222> LOCATION: (1)
255 <223> OTHER INFORMATION: a, t, c, g, other or unknown
257 <400> SEQUENCE: 24
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260 gtgctagatt ttgtcttcgg acaccaactc gaactaaacg aaatatttgt ctttctatga 120
262 aatcatagag gacaagcgtt gattatttcc attcagtttg gcaatcactc cttggaacgg 180
264 ggttgagcga acggtgcagt aggtttccgt ccctatttgc taagtcgcct agtagtagcg 240
266 agtgcggttc cgcccgtaca acgttgggta gaccgggttc cgtcctgtga tctccctcgc 300
268 cggccgccag gaga atg agt tcc aaa caa ttc aag atc ctt gtt aat gag 350
269 Met Ser Ser Lys Gln Phe Lys Ile Leu Val Asn Glu
270 1 5 10
272 gac tat caa gtc aac gtg cct agt ctt cct att cgt gac gtg tta cag 398
273 Asp Tyr Gln Val Asn Val Pro Ser Leu Pro Ile Arg Asp Val Leu Gln
274 15 20 25
276 gaa att aag tac tgc tac cgt aat gga ttt gag ggc tat gtt ttc gta 446
277 Glu Ile Lys Tyr Cys Tyr Arg Asn Gly Phe Glu Gly Tyr Val Phe Val
278 30 35 40
280 cca gaa tac tgt cgt gac cta gtt gat tgc gat cgt aag gat cac tac 494

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Input Set : A:\11420241.app

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281	Pro	Glu	Tyr	Cys	Arg	Asp	Leu	Val	Asp	Cys	Asp	Arg	Lys	Asp	His	Tyr	
282	45					50					55					60	
284	gtc	att	ggt	gtt	ctt	ggt	aac	gga	gta	agt	gat	ctt	aaa	cct	gtt	ctt	542
285	Val	Ile	Gly	Val	Leu	Gly	Asn	Gly	Val	Ser	Asp	Leu	Lys	Pro	Val	Leu	
286					65					70					75		
288	ctt	acc	gaa	ccc	tcc	gtc	atg	ttg	caa	ggc	ttt	att	gtt	aga	gct	aac	590
289	Leu	Thr	Glu	Pro	Ser	Val	Met	Leu	Gln	Gly	Phe	Ile	Val	Arg	Ala	Asn	
290				80						85				90			
292	tgc	aat	ggc	gtt	ctt	gag	gac	ttt	gac	ctt	aaa	att	gct	cgc	act	gkc	638
293	Cys	Asn	Gly	Val	Leu	Glu	Asp	Phe	Asp	Leu	Lys	Ile	Ala	Arg	Thr	Xaa	
294			95					100					105				
296	aga	ggt	gcc	ata	tat	gtt	gat	caa	tac	atg	tgt	ggt	gct	gat	gga	aaa	686
297	Arg	Gly	Ala	Ile	Tyr	Val	Asp	Gln	Tyr	Met	Cys	Gly	Ala	Asp	Gly	Lys	
298		110					115						120				
300	cca	gtc	att	gaa	ggc	gat	ttt	aag	gac	tac	ttc	ggt	gat	gaa	gac	atc	734
301	Pro	Val	Ile	Glu	Gly	Asp	Phe	Lys	Asp	Tyr	Phe	Gly	Asp	Glu	Asp	Ile	
302	125					130					135					140	
304	att	gaa	ttt	gaa	gga	gag	gag	tac	cat	tgc	gct	tgg	aca	act	gtg	cgc	782
305	Ile	Glu	Phe	Glu	Gly	Glu	Glu	Tyr	His	Cys	Ala	Trp	Thr	Thr	Val	Arg	
306					145					150					155		
308	gat	gag	aaa	ccg	ctg	aat	cag	caa	act	ctc	ttt	acc	att	cag	gaa	atc	830
309	Asp	Glu	Lys	Pro	Leu	Asn	Gln	Gln	Thr	Leu	Phe	Thr	Ile	Gln	Glu	Ile	
310				160					165					170			
312	caa	tac	aat	ctg	gac	att	cct	cat	aaa	ttg	cca	aac	tgt	gct	act	aga	878
313	Gln	Tyr	Asn	Leu	Asp	Ile	Pro	His	Lys	Leu	Pro	Asn	Cys	Ala	Thr	Arg	
314			175					180					185				
316	cat	gta	gca	cca	cca	gtc	aaa	aag	aac	tct	aaa	ata	gtt	ctg	tct	gaa	926
317	His	Val	Ala	Pro	Pro	Val	Lys	Lys	Asn	Ser	Lys	Ile	Val	Leu	Ser	Glu	
318		190					195						200				
320	gat	tac	aag	aag	ctt	tat	gat	atc	ttc	gga	tca	ccc	ttt	atg	gga	aat	974
321	Asp	Tyr	Lys	Lys	Leu	Tyr	Asp	Ile	Phe	Gly	Ser	Pro	Phe	Met	Gly	Asn	
322	205					210				215					220		
324	ggt	gac	tgt	ctt	agc	aaa	tgc	ttt	gac	act	ctt	cat	ttt	atc	gct	gct	1022
325	Gly	Asp	Cys	Leu	Ser	Lys	Cys	Phe	Asp	Thr	Leu	His	Phe	Ile	Ala	Ala	
326					225					230					235		
328	act	ctt	aga	tgc	ccg	tgt	ggt	tct	gaa	agt	agc	ggc	gtt	gga	gat	tgg	1070
329	Thr	Leu	Arg	Cys	Pro	Cys	Gly	Ser	Glu	Ser	Ser	Gly	Val	Gly	Asp	Trp	
330				240					245				250				
332	act	ggt	ttt	aag	act	gcc	tgt	tgt	ggt	ctt	tct	ggc	aaa	gtt	aag	ggt	1118
333	Thr	Gly	Phe	Lys	Thr	Ala	Cys	Cys	Gly	Leu	Ser	Gly	Lys	Val	Lys	Gly	
334			255					260					265				
336	gtc	act	ttg	ggt	gat	att	aag	cct	ggt	gat	gct	gtt	gtc	act	agt	atg	1166
337	Val	Thr	Leu	Gly	Asp	Ile	Lys	Pro	Gly	Asp	Ala	Val	Val	Thr	Ser	Met	
338		270					275						280				
340	agc	gca	ggt	aag	gga	gtt	aag	ttc	ttt	gcc	aat	tgt	gtt	ctt	caa	tat	1214
341	Ser	Ala	Gly	Lys	Gly	Val	Lys	Phe	Phe	Ala	Asn	Cys	Val	Leu	Gln	Tyr	
342	285					290				295					300		
344	gct	ggt	gat	gtt	gaa	ggt	gtc	tcc	atc	tgg	aaa	gtt	att	aaa	act	ttt	1262
345	Ala	Gly	Asp	Val	Glu	Gly	Val	Ser	Ile	Trp	Lys	Val	Ile	Lys	Thr	Phe	

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/09/155,003

DATE: 10/30/2003  
TIME: 14:49:24

Input Set : A:\11420241.app  
Output Set: N:\CRF4\10302003\I155003.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:24; N Pos. 1  
Seq#:24; Xaa Pos. 108  
Seq#:25; Xaa Pos. 108  
Seq#:26; Xaa Pos. 1405  
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Seq#:29; N Pos. 77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96  
Seq#:29; N Pos. 97,98,99,100,101,102,103,104,105,106,107,108,109,110,111  
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Seq#:29; N Pos. 142,143,144,145,146,147,148,149,150,151,152,153,154,155,156  
Seq#:29; N Pos. 157,158,159,160,161,162,163,164,165,166,167,168,169,170,171  
Seq#:29; N Pos. 172,173,174,175,176,177,178,179,180,181,182,183,184,185,186  
Seq#:29; N Pos. 187,188,189,190,191,192,193,194,195,196,197,198

**VERIFICATION SUMMARY**

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Input Set : A:\11420241.app

Output Set: N:\CRF4\10302003\I155003.raw

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M:341 Repeated in SeqNo=24  
L:714 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:96  
L:1095 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:1392  
L:1142 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:0  
M:341 Repeated in SeqNo=29